

Appl. No.: 10/076,063
Amdt. dated 10/24/2005
Reply to Official Action of May 12, 2005

Amendments to the Drawings:

In view of the Official Action's objection to the drawings as including reference character "30" for the low pass filter and the suppression assembly, the attached replacement drawing sheet, which includes FIG. 6, is an exploded schematic block diagram illustrating various elements of the suppression assembly, according to one embodiment of the present invention. In FIG. 6, the reference character for the low pass filter has been amended to "31" consistent with the specification of the present application (see page 13, lines 5-7).

Attachment: Replacement Sheet (FIG. 6)

REMARKS/ARGUMENTS

Applicants appreciate the thorough examination of the present application, as evidenced by the first Official Action. The first Official Action provisionally rejects all of the pending claims, namely Claims 1-35, under the doctrine of obviousness-type double patenting in view of co-pending U.S. Patent Application No. 10/076,188, filed on the same date as the present application. The first Official Action also rejects Claims 1-7, 11 and 13-17 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,671,249 to Andersson et al., in view of U.S. Patent No. 5,223,806 to Curtis et al. In addition, the Official Action objects to the drawings as referencing two elements with the same callout number, and objects to Claims 1, 11, 21, 23 and 32 as including a number of informalities.

As explained below, Applicants respectfully submit that the first Official Action has not presented any proper support for the assertion that the claimed inventions of the present application and the '188 application are not patentably distinct from one another. Applicants also respectfully submit that Claims 1, 11, 21, 23 and 32 do not in fact include the informalities alleged in the first Official Action. In addition, Applicants respectfully submit that the claimed invention of Claims 1-7, 11 and 13-17 is patentably distinct from the Andersson and Curtis patents, taken individually or in combination. As such, Applicants respectfully traverse the provisional rejection of the claims for double-patenting, the rejections of the claims as being unpatentable over the Anderson patent in view of the Curtis patent, and the objections to the claims as including a number of informalities. Nonetheless, to further clarify the claimed invention, Applicants have amended independent Claim 1 to incorporate various limitations from dependent Claims 2 and 3. Accordingly, Applicants have also amended dependent Claims 2 and 3. In addition, to correct an inadvertent omission of "element" in the term "network device interface element," Applicants have amended independent Claim 11. Further, Applicants have amended the reference character for the low pass filter of FIG. 6 to "31" to correctly reference consistent with the specification of the present application (see page 13, lines 5-7), and therefore respectfully submit that the objection to the drawings is overcome. In view of the amendments to the drawings and the claims, and the remarks presented herein, Applicants respectfully request reconsideration and allowance of all of the pending claims of the present application.

I. The Official Action Fails to Support a Provisional Double Patenting Rejection

The first Official Action provisionally rejects Claims 1-35 for obviousness-type double patenting in view of the aforementioned '188 application. Applicants respectfully submit, however, that although the claimed invention of the present application and that of the '188 application are related, the Official Action has not presented any proper support for the assertion that respective inventions are not patentably distinct from one another. The Official Action indicates that the claimed invention of the present application merely broadens the scope of the claimed invention of the '188 application. More particularly, the Official Action alleges that independent Claims 1 and 7 merely broaden the scope of pending Claims 1 and 2 of the '188 application by eliminating the local oscillator and spread-spectrum clock recited by independent Claim 1 of the '188 application.

Initially, Applicants note that the Official Action alleges that it has been held that the omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. However, as the Official Action failed to provide support for this assertion, Applicants cannot reasonably evaluate if, and if so to what extent, such a holding applies to the instant case. Applicants do note that MPEP § 2144.04 II.A. does indicate that such an omission is obvious if the function of the element is not desired or otherwise required (*citing Ex parte Wu*, 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989)). In the instant case, however, the Official Action has not alleged that the functions of the local oscillator and spread-spectrum clock of Claims 1 and 2 of the '188 application are not desired or otherwise required, thus leading to their omission in independent Claim 1 of the present application.

As explicitly stated in the MPEP, the fact that one application dominates another application (i.e., when an application has a broad or generic claim that fully encompasses or reads on the claimed invention of another application) cannot itself support a double patenting rejection. MPEP § 804 II. Thus, to support an obviousness-type double patenting rejection, the Official Action must establish that the claims of the present application are obvious variations of the invention defined by the claims of the '188 application. As the Official Action fails to

establish such obviousness of the claimed invention, Applicants respectfully submit that the provisional double-patenting rejection of Claims 1-35 is overcome.

II. Claims 1, 11, 21, 23 and 32 are Proper

As indicated above, the first Official Action objects to Claims 1, 11, 21, 23 and 32 as including a number of informalities. More particularly, the Official Action alleges that insufficient antecedent basis exists in independent Claims 1, 11, 21 and 32 for the limitation “the group.” Applicants respectfully submit, however, that the aforementioned passage, including the limitation “the group,” is in fact a proper recitation of a Markush group. In this regard, MPEP § 2173.05(h) I. explains that a Markush group recites a number of different members (e.g., A, B and C) as being “selected from the group consisting of A, B and C” (emphasis added). Similar to the exemplary Markush group language provided in the MPEP, independent Claims 1, 11, 21 and 32, recite synchronous mode and asynchronous mode as being “selected from the group consisting of a synchronous mode and an asynchronous mode.” Applicants therefore respectfully submit that the limitation “the group” is in fact proper in the context of reciting a Markush group, as permitted by the MPEP.

The first Official Action also objects the limitation “an LC low pass filter” in dependent Claim 23, alleging that the claim is unclear as to the expression “LC.” Applicants respectfully submit, however, that LC circuits including LC low pass filters are well known to those skilled in the art as circuits including at least one inductor (L) and at least one capacitor (C). *See* Pat. App. page 17, lines 12, 12. For a further explanation of such circuits, see Wikipedia, LC Circuit (last modified Oct. 5, 2005) <http://en.wikipedia.org/wiki/LC_circuit>. Applicants therefore respectfully submit that referring to a low pass filter as “an LC low pass filter” clearly defines the filter as including at least one inductor and at least one capacitor.

Applicants therefore respectfully submit that Claims 1, 11, 21, 23 and 32 do not in fact include the informalities alleged in the first Official Action, and that the objections to such claims as including informalities is accordingly overcome. Further, as the Official Action only provisionally rejects and/or objects to Claims 8-10, 12 and 18-35, and as the respective rejections

and objections have been overcome, Applicants respectfully submit that Claims 8-10, 12 and 18-35 are in condition for allowance or an indication of allowability.

III. Claims 1-7, 11 and 13-17 are Patentable over Andersson/Curtis

As also indicated above, the first Official Action rejects Claims 1-7, 11 and 13-17 as being unpatentable over the Andersson patent in view of the Curtis patent. In this regard, the Andersson patent provides an inter-repeater backplane with synchronous/asynchronous dual mode operation. As disclosed, an inter-repeater backplane, which can operate in either a synchronous or asynchronous mode for data transmission, includes a bus coupled between repeaters for communicating electrical signals. In addition, the inter-repeater backplane includes a data transmission mode detector for determining whether to transmit data synchronously or asynchronously. In operation, data is recovered from a received data packet and is reframed for transmission across the inter-repeater backplane. According to which mode of data transmission is selected, the data is then retimed and transmitted across the backplane. More particularly, in the synchronous mode of data transmission, the data is synchronized with the system clock. When the asynchronous mode of data transmission is selected, on the other hand, the data is transmitted asynchronously with respect to the system clock. In the asynchronous mode, the recovered data is timed with a clock signal associated with the transmitting repeater.

The Curtis patent provides a system and method for reducing electromagnetic interference and emission associated with computer network interfaces. As disclosed, a computer network interface ("NIC") exhibits reduced electromagnetic interference and emission through capacitively coupling an output transformer center tap both to reference ground and to logic ground of the NIC's transceiver. Transmit signal lines on both sides of the transceiver are also capacitively coupled to both grounds. In addition, the Curtis patent discloses that electromagnetic interference and emission can be reduced through the construction of the NIC printed circuit board and the technique for intercoupling a plurality of NIC's using shielded twisted-pair cables.

A. Claims 1 – 7

As embodied in amended independent Claim 1, the claimed invention of the present application provides a network system including a network bus electronically connected to one or more network devices, and a network controller for directing communications with the remote device(s) via the network bus. As recited, the network controller is capable of selectively operating in either a synchronous mode or an asynchronous mode. In addition to the network bus and controller, the recited system also includes one or more suppression assemblies electrically connected between the network bus and respective network devices. In operation, the suppression assemblies are capable of limiting electromagnetic emissions from the respective network devices communicating via the network bus. As amended, each suppression assembly includes an isolation transformer and a resistor. The transformer has a primary coil located proximate a respective network device and a secondary coil located proximate the network bus, where the primary and coils include a primary center tap and a secondary center tap, respectively. The resistor, then, is electrically connected between the secondary center tap and ground.

In contrast to the network system of amended independent Claim 1, neither the Andersson patent nor the Curtis patent, individually or in combination, teach or suggest a suppression assembly including an isolation transformer a resistor, the resistor being electrically connected between a secondary center tap of the transformer and ground. The Official Action concedes that the Andersson patent does not teach or suggest a network system including a suppression assembly. Nonetheless, the Official Action alleges that the Curtis patent discloses such a suppression assembly, including the aforementioned transformer and resistor, and that it would have been obvious to one skilled in the art to include the suppression assembly of the Curtis patent in the inter-repeater of the Andersson patent to disclose the claimed invention. To the contrary, however, Applicants respectfully submit that the Curtis patent does not in fact disclose a suppression assembly similar to that of amended independent Claim 1.

As explained above, the Curtis patent discloses a NIC that exhibits reduced electromagnetic interference and emission through capacitively coupling an output transformer center tap both to reference ground and to logic ground of the NIC's transceiver. More

particularly with reference to FIG. 2, the Curtis patent discloses an output transformer **90** that has an input winding **90A** proximate a first PC **10**, and an output winding **90B** proximate a communication link **20**. As disclosed, the center tap **102** of the output winding of the transformer is capacitively tied to both logic ground G_L and reference ground G_R by means of capacitors **106** and **108**. FIG. 2; and column 4, lines 52-60. Similarly, the center tap **109** of the input winding of the transformer is capacitively tied to both G_L and G_R . *Id.* at column 4, line 67 – column 5, line 2. Thus, depending on the particular ground (G_L or G_R), the Curtis patent discloses one or two capacitors electrically connected between either center tap of the transformer and ground. The claimed invention, on the other hand, includes a resistor electrically connected between a center tap of the transformer and ground.

As neither the Andersson patent nor the Curtis patent individually disclose the suppression assembly of amended independent Claim 1, the combination of the Anderson and Curtis patents likewise does not teach or suggest the suppression assembly of amended independent Claim 1. Applicants therefore respectfully submit that the claimed invention of amended independent Claim 1, and by dependency Claims 2-7, is patentably distinct from the Andersson patent and the Curtis patent, taken individually or in combination. As such, Applicants respectfully submit that the rejection of Claims 1-7 as being unpatentable over the Andersson patent in view of the Curtis patent is overcome.

B. Claims 11 and 13-17

As embodied in amended independent Claim 11, the claimed invention of the present application provides a network system that, similar to amended independent Claim 1, includes a network bus electronically connected to a plurality of network devices, and a network controller for directing communications with the remote device(s) via the network bus. As recited, amended independent Claim 11 also includes a plurality of network device interface elements adapted to interconnect the network controller with respective remote devices via the network bus. Each network device interface element includes a suppression assembly capable of at least partially limiting electromagnetic emissions from one or more of the respective network device interface elements and the respective remote device. Each network device interface element is

also capable of transmitting and receiving messages via the network bus. In this regard, the network device interface element is capable of determining if clock signals are provided with messages received via the network bus such that the network device interface is capable of transmitting messages in either a synchronous mode or an asynchronous mode based upon the determination.

In contrast to the claimed invention of amended independent Claim 11, Applicants respectfully submit that neither the Andersson patent nor the Curtis patent, individually or in combination, teach or suggest a network system including a network device interface element capable of determining if clock signals are provided with messages received via a network bus such that the network device interface is capable of transmitting messages in either a synchronous mode or an asynchronous mode based upon the determination. The first Official Action, in fact, fails to allege that either the Andersson patent or the Curtis patent, individually or in combination, teaches or suggests this feature of the claimed invention. The first Official Action does note that the Andersson patent does disclose an inter-repeater backplane capable of operating in either a synchronous mode or an asynchronous mode. In contrast to determining the mode within which to transmit messages based upon a determination of clock signals in received messages as recited by the claimed invention, however, the Andersson patent discloses that the inter-repeater backplane is set to a particular mode. *See* Andersson Patent, column 6, lines 33-38 (explaining that the repeater may be set for synchronous or asynchronous data transmission). In this regard, the repeater of the Andersson patent is set to a particular mode of transmission. The network device interface element of amended independent Claim 11, on the other hand, determines the mode of transmission based upon whether clock signals are provided with messages received by the network device interface element.

Similar to the Andersson patent, Applicants respectfully submit that the Curtis patent also does not teach or suggest the aforementioned feature of determining the mode of data transmission as recited by the claimed invention. In fact, the Curtis patent does not teach or suggest selectively operating in synchronous and asynchronous modes, much less determining the particular mode based upon received messages. Applicants therefore respectfully submit that neither the Andersson patent nor the Curtis patent, individually or in combination, teach or

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suggest the claimed invention of amended independent Claim 11, and by dependency Claims 13-17. Thus, Applicants also respectfully submit that the rejection of Claims 11 and 13-17 as being unpatentable over the Andersson patent in view of the Curtis patent is overcome.

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CONCLUSION

In view of the amendments to the drawings and the claims, and the remarks presented above, Applicants respectfully submit that all of the claims of the present application are in condition for allowance. It is respectfully requested that a Notice of Allowance be issued in due course. The Examiner is encouraged to contact Applicants' undersigned attorney to resolve any remaining issues in order to expedite examination of the present application.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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APPENDIX

1. Replacement Sheet (FIG. 6)